

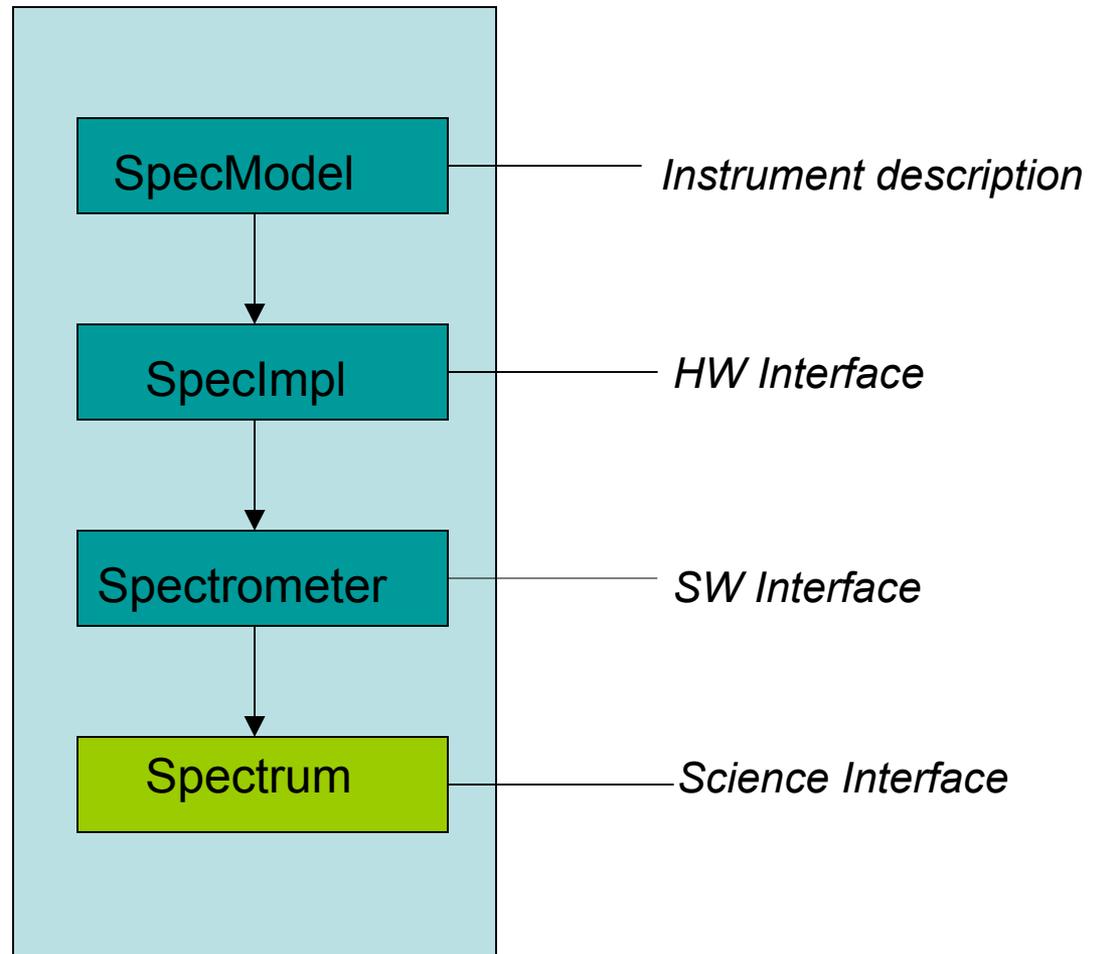
# Science Instrument Software Framework

11:20 – 11:30	Overview	Meemong Lee
11:30 – 11:45	IPS Application	Brian Lininger
11:45 – 12:00	Test Setup	James Wood

# Software Framework

Instrument  
Framework SW  
Provide

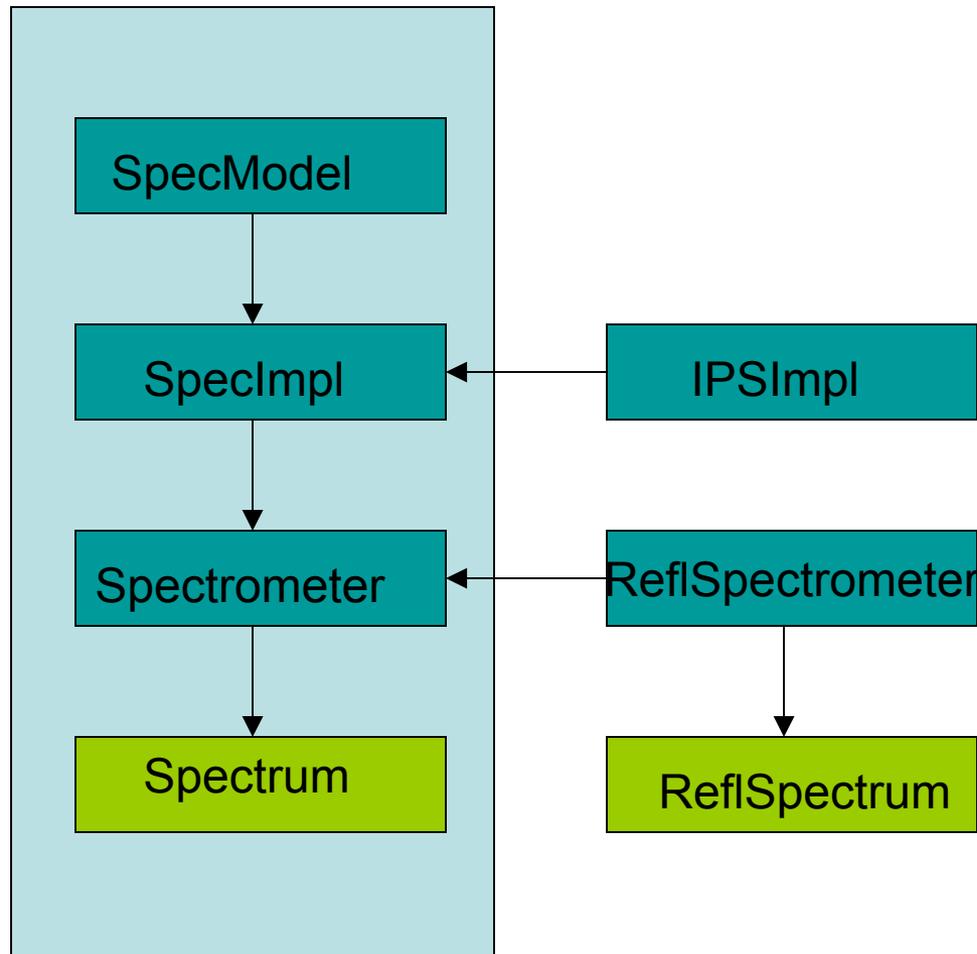
1. Provides device property parameter settings.
2. Provides a set of virtual function definitions and a set of common utility functions.
3. Provides Spectrum object construction methods.
4. Composes Spectrum header by interfacing with the system SW.



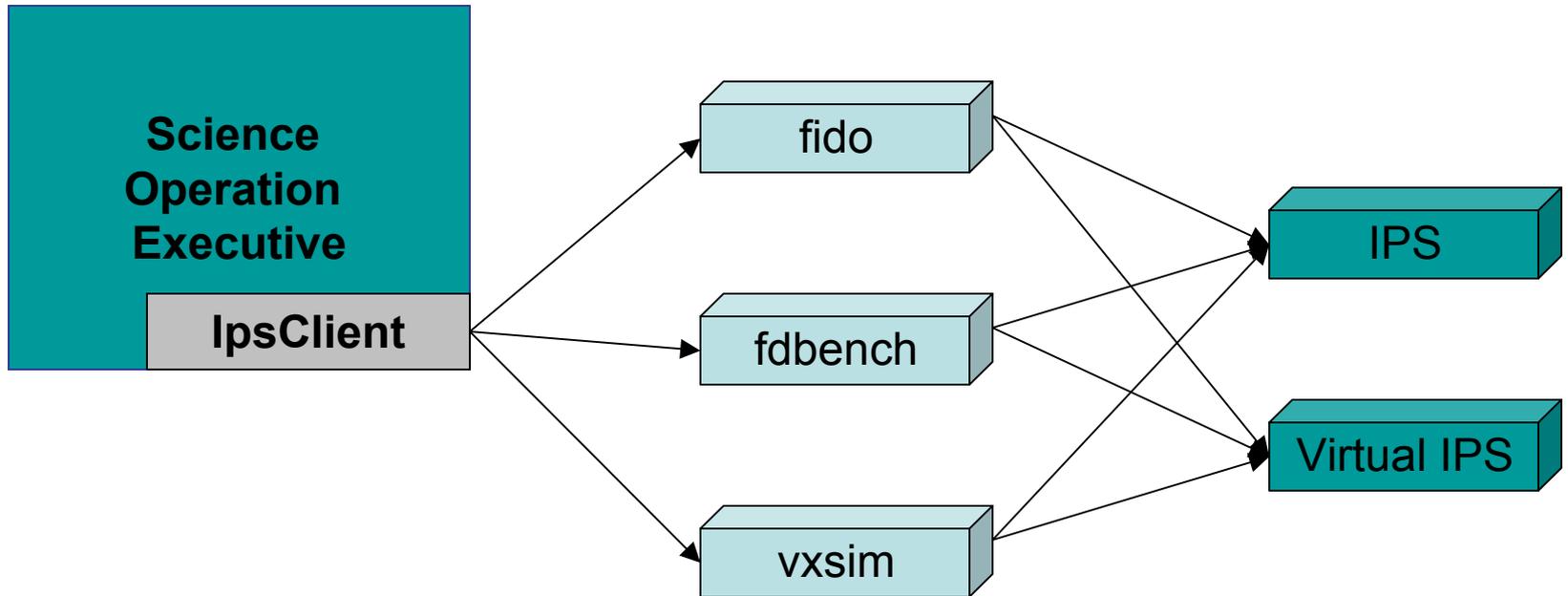
# Software Framework

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Framework SW  
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## Test Setup



- IpsClient:
  1. rlogin to one of the three targets
  2. loads the ips\_app.so library
  3. runs get\_ips\_data with the correctly formatted parameters
  4. Connects to a Server\_Socket on the target and retrieves the requested spectrum
  5. returns a Uncal\_Spectrum or Cal\_Refl\_Spectrum based upon request type

# SpecModel Components

## Instrument\_Taxonomy

Defines:

- Sensing Method
- Detector Range
- Detector Type

## RoverIF

Defines:

- Spectrometer Position & Orientation relative to Rover

## Buffer

Defines:

- Type and Size of hardware/software buffer on instrument

## Spectrometer\_Gimbal

Defines:

- Azimuth, Elevation Range
- Azimuth, Elevation Increment

## Resolution

Defines:

- # of Samples (Pixels)
- # of Lines
- # of Bands
- Sample Depth (bits)
- Instrument FOV
- Wavelength Increment

## Exposure

Defines:

- Exposure Durations and possible types (auto, index, time)